

NARRATIVE

On Tuesday, January 24, 1989, a RCRA ISS inspection and Land Ban inspection were conducted by the author (James Jones) at John Deere Harvester Works. Robert Dick, Environmental Coordinator, and Marlys Turnquist, Chemist, for the Company were interviewed.

John Deere Harvester manufactures and paints grain harvester equipment. They utilize an electro-coat system, a flow-coat system, and a water-wall system consisting of hand gun spraying in their painting operations. The types of paints used by Harvester are an 63 AKG9032 (water base paint) an alkyd resin and a urethane (two-part) paint. Regarding the aforementioned paint systems, they are located in various departments throughout the manufacturing plant. Presently, Harvester is using one electro-coat, one flow-coat, and seven water-wall paint booth paint systems. According to Bob Dick, the following hazardous wastes are generated from Harvester's manufacturing processes:

Spent caustic stripper (KOH) is generated from stripping poorly or defective painted parts at the facility. The pH of the stripper is kept at about 13.4. The spent stripper is removed as needed from an in-ground tank. The capacity of the tank is approximately 12,000 gallons. All waste generated from the tank is batch generated. Two (2) shipments were made in 1988. One shipment of 1,100 gallons was made on 6/22/88, and one shipment of 6,000 gallons was made on 8/9/88. The waste is transported by Roto Rooter in a tanker truck and manifested to John Deere Components Work, #91901300001, IAD005289806, Waterloo, Iowa, for treatment. Regarding the two waste shipments mentioned earlier, the reason for the fluctuations in the amounts of waste generated is due to Harvester's waste reduction program for this waste. Harvester pumps about a third or more of a batch prior to cleaning the tank. This amount is held for reuse. Only the more highly contaminated material and sludge is removed from the tank and shipped for chemical treatment. A review of Harvester's waste analysis report and manifests indicates that they are properly classifying the spent caustic stripper as D002, D007, and D008 on manifests.

Waste paint and related materials are generated in locations throughout the manufacturing plant. The waste may be generated in the form of discarded off-specification paint. It may be generated in the form of paint sludge, which is a by-product of the water-wall and flow-coat paint systems. It may be generated in the form of mineral spirits and paint, which results from the cleaning of spray guns and spray lines in the water-wall paint booths. The facility generates 34 drums every four months. Three (3) manifested shipments were made in 1988 to EWR, ILD087157251, in Coal City, Illinois. The last manifested shipment of this waste was made on 9/12/88.

Paint sludge solid was generated from 1986 to 1987 as a result of cleaning a 12,000-gallon paint dip tank that was taken out of service by Harvester in late December of 1987. The waste was RCRA hazardous for lead (D008).

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Waste mineral spirits are generated as a separate waste stream in various departments (V, V-2, V-4, K-2, K-3, K-7, M-3 and K-95) throughout the manufacturing plant as a result of cleaning tooling, machine parts, etc., within each department. Harvester uses red containers (see photographs #1, #3, and #4) which initially contain clean mineral spirits. These containers are placed in various departments, and the contents are used to clean parts and tooling until the mineral spirits becomes spent. When the mineral spirits becomes spent, it is dumped into a 55-gallon drum by facility personnel in a designated area of the department (personnel from all three shifts use these containers and none have received hazardous waste training according to Mr. Dick). The red container is refilled with clean mineral spirits, which is also located in bulk near the accumulation drum, and the process as described above is repeated. Four drums a year of this waste are generated. It appears that the facility is properly classifying this waste as D001 on manifests. The only manifested shipment of this waste was made on 9/12/88. Four drums were manifested to EWR (ILD087157251) in Coal City for reclamation.

Waste 1,1,1, trichloroethane is also generated as a result of cleaning sticky and gummy parts and other facility maintenance equipment throughout the manufacturing plant. From 1985 to 1987, Harvester generated about two drums a year of waste 1,1,1, trichloroethane. According to Mr. Dick, parts were dipped cleaned in small containers until the contents were spent. In 1988, the Company discontinued this process and started using towels which were saturated with 1,1,1, trichloroethane to clean its parts and tooling. No wastes were generated in 1988 using this procedure. The towels which are accumulated from this procedure are stored in closed containers. They are picked up and cleaned by Means Towel Service.

Wastewater treatment sludge is generated from treating prepaint wash waters, contaminated waters from the water-wall paint booths and rinse waters from the washing of tractors and related equipment which are discharged to the facility's wastewater treatment plant. In 1985, for some strange reason, Harvester classified its water treatment sludge as an F006 waste and disposed of it as hazardous, even though all analyses have shown it to be nonhazardous and no electro-plating operations are performed at this facility. Currently, the facility is disposing their water treatment sludge as nonhazardous waste. The waste is sent to Upper Rock Island County landfill, LPC #1618100014, for disposal.

During the inspection and tour of the facility, the following apparent violations were observed and checked in the inspection report:

Section 722.111 - The facility failed to make the correct waste determination as required by this Section. The facility misclassified two manifested shipments of "waste mineral spirits and 1,1,1, trichloroethane." The first shipment was shipped on 10/8/86 on Wisconsin Manifest #88576. The second shipment was shipped on 12/11/87 on Wisconsin Manifest #88580. Both shipments were manifested to Waste Research and Reclamation Co., Eau Claire, WI, WID990829475. Harvester used hazardous waste number D001 on each of the above manifests. The correct hazardous waste number should have been F001.

Section 722.134(a) - The facility failed to comply with the following requirements of 35 Ill. Adm. Code, Subpart C:

Section 725.116(a) - All facility personnel handling hazardous waste have not completed the program required by this Section. Facility personnel that handle mineral spirits in various departments (V, V-2, V-4, K-2, K-3, K-7, M-3, and K-95) throughout the manufacturing plant have not been trained. The amount and type of training depends on the degree of hazard associated with the job.

Section 725.116(b) - All facility personnel handling hazardous waste have not been trained as required in Paragraph (a) of this Section.

Section 725.116(c) - All facility personnel have not had an annual review of the initial training required in Paragraph (a) of this Section.

Section 725.116(d) - The facility did not maintain the following documents and records at the facility:

- 1) The job title for each position at the facility related to hazardous waste management and the name of the employee filling each position;
- 2) A written job description for each position listed under Paragraph (d)(1) of this Section;
- 3) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under Paragraph (d)(1) of this Section;
- 4) Records that document that the training or job experience required under Paragraphs (a), (b), and (c) of this Section has been given to and completed by facility personnel.

Section 855.104 - The facility did not list the correct hazardous waste number on two manifested shipments of "waste mineral spirits and 1,1,1, trichloroethane." The wastes were shipped on Wisconsin manifests #88576 and #88580 on 10/8/86 and 12/11/87, respectively..

A CIL will be sent to the facility citing the apparent violations listed above.

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